Applicant : Brosnihan et al Attorney's Docket No.: 07043-060002 / B97-065-2

Serial No.: 09/342,348 Filed: June 29, 1999

Page : 2 of 8

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) A method of fabricating a microelectromechanical system, comprising:

providing a substrate having a device layer, a handle layer and a sacrificial layer between the device layer and the handle layer;

etching a first trench in the device layer;

depositing a dielectric isolation layer in the first trench to form an isolation trench; etching a second trench in the device layer, the second trench defining a microstructure including a plurality of elements laterally anchored to the isolation trench such that the isolation trench provides electrical isolation for the anchored elements of the microstructure from each other; and

removing a portion of the sacrificial layer, wherein the removed portion entirely undercuts the plurality of laterally anchored elements.

- 2. (Currently Amended) The method of claim 31 further comprising forming circuitry in the second region of the substrate device layer outside the first region.
- 3. (Original) The method of claim 2 further comprising depositing an electrical connection over the first trench to connect the microstructure to the circuitry.
- 4. (Original) The method of claim 1 further comprising depositing a filler material over the isolation layer in the first trench.

Applicant: Brosnihan et al Attorney's Docket No.: 07043-060002 / B97-065-2

Serial No. : 09/342,348 Filed : June 29, 1999

Page : 3 of 8

5. (Original) The method of claim 1 wherein the isolation layer fills the first trench.

6. (Cancelled)

7. (Previously Presented) The method of claim 1 wherein removing a portion of the sacrificial layer includes releasing the microstructure.

8. (Previously Presented) The method of claim 1 wherein the step of etching the first trench etches through the device layer to expose the sacrificial layer.

9. (Previously Presented) The method of claim 1 wherein the step of etching the second trench etches through the device layer to expose the sacrificial layer.

10. (Previously Presented) The method of claim 1 wherein the sacrificial layer includes silicon dioxide.

11. (Original) The method of claim 1 wherein the device layer includes epitaxial silicon.

12. (Original) The method of claim 1 wherein the isolation layer includes silicon nitride.

13-22. (Cancelled)

23. (Previously Presented) The method of claim 1, wherein the step of etching the second trench includes etching a portion of the device layer that abuts the isolation trench.

24. (Cancelled)

Applicant: Brosnihan et al Attorney's Docket No.: 07043-060002 / B97-065-2

Serial No.: 09/342,348 Filed: June 29, 1999

Page : 4 of 8

25. (Previously Presented) The method of claim 1, wherein the step of etching the second trench includes forming at least one movable element and at least one generally immobile element.

- 26. (Previously Presented) The method of claim 1, wherein the step of etching the first trench comprises inductively coupled plasma etching.
- 27. (Previously Presented) The method of claim 1, wherein the step of etching the second trench comprises inductively coupled plasma etching.
- 28. (Previously Presented) The method of claim 1, wherein the removed portion of the sacrificial layer at least partially undercuts the isolation trench.
- 29. (Currently Amended) The method of claim 1, wherein the first trench surrounds a region of the substrate device layer.
- 30. (Currently Amended) The method of claim 1, wherein the first trench electrically isolates a first region of the substrate device layer from a second region of the substrate device layer.
- 31. (Previously Presented) The method of claim 30, wherein the second trench is located in the first region.